



U.S. Patent Application Serial No. **10/730,013**
Response to Office Action dated November 28, 2006

IN THE ABSTRACT:

Please delete the current Abstract and replace therewith the attached substitute Abstract.

REMARKS

Claims 1-11 are pending in this application, all of which have been amended. No new claims have been added.

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

Accordingly, claims 1-2, 4-5, 7-9 and 11 have been amended to correct the noted instances of indefiniteness.

Thus, the 35 U.S.C. § 112, second paragraph, rejection should be withdrawn.

Claims 1, 4, 5, 7-9 and 11 stand rejected under 35 U.S.C. § 102(b) as anticipated by WO 02/080299 to Fuji et al. (hereafter, "Fuji et al. '299") and/or under 35 U.S.C. § 102(e) as anticipated by U.S. Patent 7,081,317 to Fuji et al. (hereafter, "Fuji et al. '317").

Applicants respectfully traverse these rejections.

Fuji et al. '317 has an effective U.S. filing date of December 11, 2002, which is subsequent to the earliest foreign priority date of December 9, 2002 claimed in the instant application. Thus, Fuji et al. '317 is not a proper § 102(e) reference.

Fuji et al. '299 discloses a polymer electrolyte thin film fuel cell, including a substrate having a plurality of openings; an electrolyte membrane-electrode assembly formed on the substrate so as to cover each of the openings, the assembly comprising a first catalyst electrode layer, a hydrogen ion conductive polymer electrolyte membrane and a second catalyst electrode layer which are formed successively; and fuel and oxidant apply means for supplying a fuel or an oxidant gas to the first catalyst electrode layer through the openings, and an oxidant gas.

It should initially be noted that the present invention relates to a solid oxide fuel cell (hereafter, "SOFC"), while Fuji et al. '299 relates to a polymer electrolyte fuel cell (hereafter, "PEFC").

In the SOFC of the present invention, the mixture gas of the fuel gas and the oxidant gas (air) can be introduced into the electrodes. The claim amendments clarify the location of the contact between the electrolyte and the electrodes. The claims, as amended, now recite that the side edges of the electrolyte and the electrode are in contact. Thus, both of the electrodes are exposed and mixed gas can be introduced to the electrodes without making an opening in the substrate.

On the other hand, in the PEFC of Fuji et al. '299, the fuel gas and the oxidant gas have to be separately introduced into the first catalyst electrode 12 and the second catalyst electrode 14, respectively. Also, two electrodes and electrolyte are layered in the direction of thickness and the first catalyst electrode 12 is covered by the electrolyte 13 (not disposed). Thus, the cell of Fuji et al. '299 needs openings 16 in the substrate 11 in order to introduce the fuel gas into the first catalyst electrode layer 12. As noted above, the present invention does not need any opening in the substrate.

Thus, the 35 U.S.C. § 102(b) and 35 U.S.C. § 102(e) rejections should be withdrawn.

Claim 10 stands rejected under 35 U.S.C. § 102(b)/103(a) as anticipated by or, in the alternative, unpatentable over Fuji et al. '299 and/or under 35 U.S.C. § 102(e)/103(a) as anticipated by or, in the alternative, unpatentable over Fuji et al. '317.

Applicants respectfully traverse these rejections.

As noted above, Fuji et al. '317 is not a proper reference under 35 U.S.C. § 102(e) and therefore, is also not a proper reference under 35 U.S.C. § 103(a).

Fuji et al. '299 fails to disclose the limitations recited in the amendments to claim 7, from which claim 10 depends.

Thus, the § 102(b)/103(a) rejections should be withdrawn.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Fuji et al. '299 and/or Fuji et al. '317.

Applicants respectfully traverse this rejection.

Fuji et al. '299 fails to teach, mention or suggest the limitations recited in the amendments to claim 1, from which claim 6 depends.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

The Examiner has indicated that claims 2 and 3 would be allowable if rewritten in independent form.

Applicants respectfully defer this action until a FINAL Office Action, if any, is received.

In view of the aforementioned amendments and accompanying remarks, claims 1-11, as amended, are in condition for allowance, which action, at an early date, is requested.

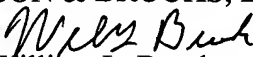
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP


William L. Brooks

Attorney for Applicant
Reg. No. 34,129

WLB/ak
Atty. Docket No. 031312
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



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PATENT TRADEMARK OFFICE

Enclosures: Substitute Abstract of the Disclosure (clean and marked versions)
Petition for Extension of Time
Check in the amount of \$120.00

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ABSTRACT

A fuel cell ~~comprising~~ including at least one single cell C having an electrolyte 3, a fuel electrode 5, and an air electrode 7, wherein the single cell C is supported on a substrate 1 and the electrolyte 3 is disposed on ~~[[one]]~~ a first surface of the substrate 1, with the fuel electrode 5 and the air electrode 7 disposed on the ~~[[same]]~~ first surface of the substrate 1 so as to sandwich the electrolyte 3.